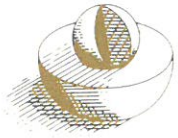


GENERAL FOODS
WORLD FOOD PRIZE



OUR COMMON AGRICULTURAL FUTURE

Acceptance Speech on the Occasion of the Presentation of the General Foods
World Food Prize on 6 October 1987

by M. S. Swaminathan

I am grateful, both to those who conceived this prize and to those who decided to award it to me. I am aware that many on this spaceship Earth are more worthy of this recognition. I am equally aware that, although I was singled out for the recognition, I could have accomplished little in my life without the generous support of many other men and women.

In a spirit of thanks to all who have helped me, I would like to share with you my personal philosophy of agriculture.

It was Martin Luther King who once observed:

“All life is interrelated...We are caught in an inescapable network of mutuality...Before you finish eating breakfast in the morning, you’ve depended on more than half the world. This is the way our universe is structured, this is its interrelated quality. We aren’t going to have peace on earth until we recognize this basic fact of the interrelated structure of all reality.”

In no other area of human need and endeavor is there so much global interdependence as in agriculture. Yet the urban public seldom recognizes that we live in this world as guests of green plants and of the farmers who cultivate them.

Experience shows that countries that take farmers and farming for granted come to grief sooner or later. Yet complacency continues to grow in many of the planners and political leaders who establish the priority of the farm sector in national development plans. The security they feel is a false one. We have no time to relax on the food production front, as my good friend Dr. Norman Borlaug often reminds us.

True, the global reserves of food grains, milk powder, and butter are growing daily. But simultaneously, the number of children, women, and men who go to bed hungry is also increasing. Why have all of our intellectual, technological, financial, and spiritual resources failed to find a solution to this age-old irony. Why?

Socrates probably gave us the answer: “Nobody is qualified to become a statesman who is ignorant of the problem of wheat.” If statesmen who determine national policies and priorities

would all become conversant with food production and equitable distribution, hunger could be made a problem of the past sooner than otherwise would be possible.

China, which has more than 20 percent of the world population, has ensured basic food security for all its people. Here is an example of how political will, coupled with appropriate development strategies, can give every child an opportunity to realize his or her potential. India, with the next largest population, has shown how agricultural production can be increased to desirable levels. Millions of its people still suffer from undernutrition due to inadequate purchasing power, but India has avoided famines. It avoids them thanks not just to its policy of maintaining substantial food grain reserves, but also to the large public distribution system and rural works program it has developed.

The examples of China and India offer hope. Yet the world population and the subsequent pressure on the supporting capacity of the land continue to grow. In the year 2000, 4.8 billion of the expected global population of 6.1 billion will be living in developing countries. The famine of jobs, which is already serious in many developing countries, is likely to increase in quantitative and qualitative dimensions. As a consequence, inadequate purchasing power, which is the primary cause of undernutrition, will intensify.

The elimination of hunger and its real cause, poverty, should be at the top of the human agenda for common action. Unfortunately, the well-fed do not seem to be very concerned with the hunger of other people, except in times of the greatest crises, such as the Ethiopian famine. Most people fear that “if others get more, I will get less.” We need to embrace the idea of a global family, that the survival of the human species depends on a harmonious relationship with all people and with the earth on which we live.

How can we bring about this change in attitude and behavior? If we are really serious about eliminating hunger, we must overcome the economic interests, the sociopolitical interests, and sometimes sheer ignorance or indifference, which together form a political will that guarantees that the poor will remain poor.

The roots of such attitudes are many and varied, but let me say that the *tap root is fear* — a fear of having to share power and resources. We therefore need to show that helping the weak to become strong solidifies the whole community.

How can we generate concern for other people with economic and social handicaps? How can we help transform this concern into meaningful action? Concentrating on nutrition security for all people at all times, let me tell you of three areas where people everywhere can and should work together.

First, I would like to see high priority accorded to fighting what I call the “ecological fire” raging in most parts of the world. Developing countries are ravaged by this fire, through such mechanisms as deforestation, soil erosion, desertification, water pollution, and overpopulation. Developed countries suffer equally, through atmospheric pollution, acid rain, contamination of water through toxic wastes, and environmental mutagens and carcinogens.

Certain phenomena, such as loss of biological diversity, destruction of the ozone layer, nuclear fallout, and potential climatic changes resulting from ocean warming and carbon dioxide accumulation in the atmosphere will affect us all, regardless of the problem's geographic origin.

Today, we are concerned with fighting conventional fires in buildings and forests. Ironically we are not fully aware of the vast dimension and potential impact of the ecological fires that affect our basic life-support systems of land, water, flora, fauna, and atmosphere.

Some hopeful signs are fortunately emerging. The Protocol for limiting the use of ozone-destroying chemicals signed recently in Montreal by 24 nations and the development of a time-bound tropical forestry action plan are good examples of this hopeful trend. We need to strengthen this trend.

Responses to the environmental challenges we face should include measures for maintaining biological diversity and ecological processes. Planning and managing irrigation systems, promoting natural forest growth, and conserving the entire system of production from upstream forest to downstream fishery are vital for enduring food and nutrition security.

The ecological fires which can destroy the security of generations yet to be born, cannot be put out in a day, or a month, or even a year. Extinguishing them needs long-term commitment and innovative approaches. Sadly, the resources to undertake afforestation, soil conservation, and other measures often are not easily available in seasons when there is adequate moisture in the soil. Fifteen years ago I pleaded for a good weather code for undertaking ecological rehabilitation programs in years with normal rainfall. Unfortunately, national and international aid disappears when the rains come.

A second and equally important area in need of global cooperation is the promotion of what I would call a "symphonic agricultural system," based on integrated principles of ecological sustainability, economic viability, and equity. The various links in the production-marketing-consumption chain of a symphonic agricultural research and development program are designed to promote growth without loss of stability. Quite frequently, the concept of a sustainable agricultural production system is used to plead for the preservation of the status quo or to revert to old production technologies. A dynamic concept of sustainability is necessary to help us meet the needs of an expanding population while maintaining and enriching the natural resource base.

In most developing countries, a vertical growth in productivity and a higher intensity of cropping are the two major pathways through which the additional food needed will have to be produced. Fortunately, many of these countries have the capacity to increase both yields and cropping intensity with current technology levels. For example, given an optimum blend of three elements — viable technology, efficient services, and supportive government policies — we can double the average yields in several countries with chronic food shortages with the technologies now available. Dr. Borlaug and his colleagues are demonstrating this in several food-deficient African nations.

Dr. Julius Nyerere, the President of the South Commission and former President of Tanzania, once remarked: "Many expatriate experts come to me and say that Tanzania has a rich production potential. I tell them I am tired of hearing about the production potential of my country. What I want is production."

While external help can be useful, and is often necessary, converting untapped production potential into actual production is largely in the hands of the government and people of every country. Unfortunately, governments in developing countries tend to exhibit a strong urban bias in their resource allocation process. Rural areas get little attention as far as basic provisions and infrastructure are concerned. Mahatma Gandhi once said that the most serious form of brain-drain that occurs in India is the migration of skilled and educated persons from the village to the city.

Fortunately, new technologies that require both brawn and brain can provide an opportunity to retain educated youth in villages. Unless youth can feel excited about the opportunities now available for a technological transformation of rural professions, the fate of the poor will be bleak.

The mass media term "miracle seeds" created a misleading impression that agricultural progress can be achieved through miracles. There are no short cuts to progress in agriculture or aquaculture. Above all, people should not be misled into thinking either that modern inputs are not needed for output or that biotechnology will solve all our problems. Output cannot be increased without the appropriate inputs. Tropical soils, often hungry and thirsty, support excellent crops if they are provided with water and nutrients. Therefore, we should aim to reduce not the essential inputs to the crops but rather the cost involved.

Recent research in the International Rice Research Institute and other institutes has shown that cost reduction without yield reduction can be achieved by using purchased inputs efficiently and by substituting farm-grown inputs for some of the market-purchased ones. This is an area where there is much scope for an intelligent integration of traditional and emerging technologies.

Prices in international markets for primary agricultural commodities and opportunities for trade influence greatly the agricultural health of many developing countries. Some hopeful trends are now emerging that could lead to stability and equity in international trade in agricultural products. If developing countries are not given a fair deal in agricultural trade, many of them will never be able to remove the severe debt burden which is crippling them economically and politically.

John Mellor, has stressed that the best way to improve the status of the world's poor is through the transfer of scientific resources. This is because a dynamic agricultural production program can be initiated and sustained only with the help of a dynamic national research system. The International Agricultural Research Centers (IARCs) supported by the Consultative Group on International Agricultural Research (CGIAR) have helped many nations buy time by providing the needed backstopping, in both research and training. The stronger a national research system, the greater is the benefit derived from an IARC.

Unfortunately, many developing countries do not realize the pivotal role of science and technology in converting the natural endowment of a country into wealth meaningful to its people. Research gets low priority in resource allocation; and research institutions are ill-equipped and inadequately funded.

Consequently, good scientists go to the better endowed institutions in developed countries. And what draws them is not just better working conditions. The growing gap in pay, privileges, and perquisites between those scientists employed in advanced institutions in developed countries and those scientists in national agricultural research systems of developing nations is becoming a major cause of brain-drain. A low-cost mechanism on the Peace Corps model will have to be developed to fill critical gaps in technological expertise, where needed.

Another concern is the trend toward total privatization of plant breeding research in developed countries and the ever widening scope of patent rights. From such a concern arises the recent move in FAO to promote, in developing countries rich in crop-genetic resources, the concept of farmers' rights to compensate for the breeders' rights prevalent in developed nations. Seeds, which from the dawn of agriculture have known no political frontiers until now, may soon be required to have, in addition to phytosanitary certificates, "passports" to be issued only upon substantial payment. Thus, technology, as well as trade, is becoming a source of dispute and discord. It is sad that agriculture, which could be a major instrument for international cooperation, is becoming another source of polarization. It is in this context that the strengthening of a nonpolitical and non commercial scientific organization like the CGIAR assumes urgency.

The third area that requires global cooperation is an analysis of the reasons for our inability to achieve freedom from hunger. The problem needs understanding both at the production and consumption levels.

Political leaders often tend to take a short-term view of essentially long-range problems. They are interested in "crash agricultural production programs" which are launched with a good deal of political fanfare. Such programs generally ignore the human beings whose toil is vital to their success. It is not surprising that many of them collapse after they have wasted scarce resources. I have come across many agricultural plans developed by agricultural departments in Asia and Africa where the word "farmer" is not mentioned, even by mistake. And these are documents related to raising production! All the other ingredients are there — credit, seeds, irrigation, fertilizers, pesticides, and farm implements — but not the human being who will use all these inputs. And when the term "farmer" is finally used, it is mostly taken to mean men, seldom women farmers and farm labor. Yet we suspect women played a leading part in the domestication of plants more than 12,000 years ago. In most developing countries, they continue to perform key functions in seed selection, food production, postharvest conservation, and organic recycling. Also, the poorer the household the greater the need for women to have access to independent income.

Yield targets are frequently set in most government plans but seldom do we see a minimum income target for farming families. Public and private sector employees are always concerned with their net take-home pay, continuously adjusted against inflation. But the same officials,

when formulating policies for the farm sector, do not think that small farmers in the self-employed sector deserve a minimum take-home pay. A minimum income target for families engaged in rural occupations also ensures adequate resource flow to the villages and helps correct imbalances in the terms of trade between the farm and nonfarm sectors. We need a “New Deal” for the rural self-employed in the Third World whose livelihood security depends mainly on land-and water-based occupations.

In this context, I would like to pay tribute to President Corazon C. Aquino of the Philippines, whose government has decided that the aim of agricultural progress is to increase in real terms the income of Filipino farmers — from about US \$60 a month at present to US \$100 per month by 1992. Unless we can reorient the thinking of governments along these lines, we will always have politicians and professionals talking about the untapped potential of their countries but not doing anything to realize it.

The livelihood security of the poor in rural areas depends upon diversified opportunities for employment both on the farm and in off-farm sectors. To undertake this task on a scale which matches needs, more investment is essential in rural areas. FAO has estimated that a total investment of US \$1500 billion (in 1980 prices) will be needed up to the year 2000, if developing countries are to achieve the necessary growth rates in agriculture.

The Brundtland Commission has dealt with the interrelationships among ecological health, food security, and arms expenditure. The global expense for arms is now estimated at \$2 million per minute, or nearly \$20 billion a week. In spite of such an expenditure, international surpluses in terms of cash, commodities, and commercial technology are abundant in developed countries. A recent study by a group of economists at the World Institute for Development Economics Research (WIDER) points out that during the next 5 years, Japan alone could easily transfer resources worth US \$125 billion to developing nations. Resources can thus become available if there is a political will to help the poor.

We should constantly remind ourselves that hunger robs millions of individuals of the opportunity to lead fuller lives. And today, although we know that there is no valid excuse for hunger to exist, we still do not know how to remove this stigma from our civilization.

May I suggest three major lines of action to supplement present efforts.

First, we need to make people aware of the fact that we can create a truly joyful world, where not a single person spends a night hungry. How can we do this on a scale that can have an impact? Television is obviously the communication medium of choice. If about two billion people can watch the Olympic games or the World Cup football tournament on TV around the world, can we not let them see a “Freedom From Hunger Olympics,” where countries and organizations demonstrate the methods they have used to provide physical and economic access to food to everyone?

May I appeal to the General Foods Fund to take the lead in organizing this World Without Hunger Olympics? A global event like this might be organized every two years, with the help of national and international organizations committed to promoting ecological and nutrition secu-

ity. Among them are the Better World Society, The Hunger Project, the Worldwide Fund for Nature, the International Union for the Conservation of Nature and Natural Resources, the International Council of Scientific Unions, the UN/FAO World Food Program, UNICEF, and many others.

A second suggestion is the development of a mechanism through which scientists and farmers from different countries can share experience and know-how. Currently, there are “peasant to peasant” organizations. Similarly, scientists have many opportunities to meet and exchange ideas. The communication revolution we are witnessing now will increasingly facilitate continuous intellectual interaction across continents and reduce the need for formal conferences. What is missing is a mechanism for promoting joint scientist-farmer undertakings. If agricultural research becomes a joint-sector activity involving scientists and farmers, the growing gap between knowing and doing can be bridged. Also, the pace of development and diffusion of location-specific technologies can be accelerated.

Finally, we need intervention programs tailored to meet the specific needs of countries where hunger is prevalent. Professor Amartya Sen has shown in several of his books and articles how well-designed public intervention measures that enhance entitlements can reduce or eliminate hunger and expand life expectancy. Agrarian reform and employment guarantee schemes are important in this respect.

The challenge lies in developing strategies at the national level for utilizing food and commodity aid in a way that will help end the need for such aid, not perpetuate dependence and erode self-reliance. Considerable experience in this field already exists within international organizations such as the World Food Program and UNICEF as well as within many bilateral and national organizations. Based on an analysis of this experience, an action code for initiating appropriate “Food for Self-Reliance” and employment guarantee programs can be prepared.

To sum up, I plead for coordinated nongovernmental initiatives in, first, generating awareness by taking advantage of the powerful mass media tools now available; second, analysis of field problems and developing solutions for them jointly by farmers and scientists; and third, action in utilizing the growing global grain surpluses for enabling all those in need of help to earn their daily bread.

We live in an age of unparalleled opportunity for promoting sustainable nutrition security. The prospect for a world without hunger is a glorious legacy given to our contemporary world by scientists and technologists; communicators and social scientists; administrators and industrialists; and workers in the factories, fields, forests, pastures, rivers, and oceans. As we depart for dinner this evening, what could be a more satisfying and joyful feeling than knowing that every other member of the human family will also go to bed after a nourishing meal? Until such a wholly attainable world becomes a reality, our task remains unfinished.